

IEEE Global Communications Conference

7-11 December 2021 • Madrid, Spain

Connecting Cultures around the Globe

CALL FOR PAPERS

IoT and Sensor Networks Symposium

SCOPE AND MOTIVATION

With the promise of revolutionizing the way we live, work and manufacture, it is no surprise why the Internet of Things (IoT) has picked up the momentum in both industry and academia. Thanks to the increased connectivity and the continued miniaturization of computers and smart devices, IoT will generate huge volumes of data that will have to be analyzed to uncover hidden patterns, correlations and other insights. Moreover, in the industrial environments (Industry 4.0) as well in smart spaces (building, houses, etc.) and connected cars communications will require higher reliability, lower latency and scalability. Several technologies such as BLE, Zigbee, WirelessHART, IEEE Std 802.15.4 TSCH, 6TiSCH, LPWAN (LoRa, Sigfox, NB-IoT, LTE-M etc.) RAW have been proposed to tackle these requirements. The forthcoming 5G networks promise not only increased data rates but also ultra-low data latency communication for critical IoT applications that require extreme reliability. 5G will enable Machine Type Communication (MTC) one of the most promising technologies for IoT applications which is gaining a tremendous interest among mobile network operators, equipment vendors, MTC specialist companies, and research bodies. This anticipated high-traffic demands, low-latency and deterministic delivery requirements stemming from IoT and machine-to-machine (M2M) communications can be met only with radical changes in terms of architecture and communication solutions. Recently, Fog/Edge-to-thing continuum is proposed to mitigate the heavy burden on the network due to the centralized processing and storing of the massive IoT data. Fog/Edge-enabled IoT architectures ensure closer processing in proximity to the things, which results in small, deterministic latency that enables real-time applications and enforced security.

The IoT and Sensor Networks Symposium at IEEE Globecom 2021 aims at a forum that brings together scientists and researchers to present their cutting-edge innovations in all aspects of the field. This track solicits technical papers describing original, previously unpublished papers pertaining to trends, issues and challenges of the Internet of Things. You are invited to submit your research paper(s) related to the following topics of interest (but not limited to):

MAIN TOPICS OF INTEREST

- 5G Networks and IoT
- IoT Security and Trust
- IoT and Personal Data Protection
- Artificial Intelligence and IoT
- IoT Large Scale Pilots and Portability
- IoT Interoperability and Multi-Platform Integration
- Software Defined Network (SDN), Network Function Virtualization (NFV) and IoT
- Sensor and Actuator Networks
- IoT Protocols and Standards (IPv6, 6LoWPAN, RPL, 6TiSCH, RAW, WoT, oneM2M, etc.)
- Ultra-low power IoT Technologies and Embedded Systems Architectures
- Wearables, Body Sensor Networks, Smart Portable Devices
- Blockchain technology for IoTs
- Communications technologies: NB-IoT, LoRa, Sigfox.
- Complex and Compound Sensors
- Connected Car, Automotive, Intelligent Transport
- Cooperative Computing for IoTs
- Cooperative Sensor Systems
- Design principles and best practices for IoT application development
- Dynamic scheduling, power control, interference management, and QoS
- Management in IoT networks
- Experience and lessons learnt for standards based IoT large scale pilots/demonstrators
- Fog/Edge Caching techniques for IoT
- Innovative routing and scheduling protocols

- Design Space Exploration Techniques for IoT Devices and Systems
- Heterogeneous Networks, Web of Things, Web of Everything
- Named Data Networking for IoT
- Internet of Nano Things
- Sensors Data Management, IoT Mining and Analytics
- Adaptive Systems and Models at Runtime
- Distributed Storage, Data Fusion
- Routing and Control Protocols
- Resource Management, Resource Allocation, Medium Access Control
- Mobility, Localization and Management Aspects
- Identity Management and Object Recognition
- Localization Technologies
- Edge Computing, Fog Computing and IoT
- Machine to Machine (M2M)/Devices-to-Devices communications and IoT
- Industrial IoT and Factory of Things and Internet of Things
- Ambient Intelligence
- Application of Fog/Edge computing to IoT: architectures and implementations
- Autonomic Computing for IoTs
- Interoperability methodologies for heterogeneous IoT
- IoT big data and predictive analysis
- IoT for developing countries
- IoT for smart manufacturing (industry 4.0) and smart spaces
- IoT standards platforms interworking
- Horizontal application development for IoT
- Low-power Computing
- Massive MTC (mMTC)
- Messaging Technologies for the Industrial IoT (Google QUIC, DDS, AMQP, MQTT, MQTT-SN, CoAP, etc.)
- Mobile platforms as sensors
- Mobile crowdsensing
- Mobility, Localization and context-adaptive Internet of Things
- New communications media for Low Power Wide Area Networks
- Practical Perspectives on IoT in 5G Networks
- RFID sensing technology
- Secure and privacy-preserving IoT communications
- Sensor Integration
- Smart Cities, Smart Home
- Software Defined Networking (SDN) and NFV for IoT

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IMPORTANT DATES

Paper Submission: 15 April 2021 (23:59)

Acceptance Notification: 25 July 2021

Camera-Ready: 1 September 2021

SUBMISSION

All papers for technical symposia should be submitted via EDAS through the following link:

<https://www.edas.info/newPaper.php?c=27481>